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ABSTRACT

The introduction of the open classroom concept, individualized instruction, independent study, use of technology, and other innovations provide supportive evidence that there may be new ways to minimize the limitations imposed on elementary school physical education programs by teachers, students' ability, or facilities. In view of this, a cooperative project between the Department of Physical Education for Men, Purdue University, and Cumberland Elementary School was initiated to develop a multi-media approach for teaching tumbling to upper elementary school children. The program was initiated for two co-ed sections of fourth through sixth graders, averaging 30 students. The gymnasium was divided into three viewing and listening areas and five activity areas. Each viewing area included a writing area, a loop film projector, a cassette recorder, a screen, and individualized instructional packets (IIPs) for one activity. Activity areas had necessary activity equipment and posted individual skill sheets. The class was divided into seven groups and randomly assigned to the three viewing areas and four activity areas. Each student read the IIP instructions and started the recorder and the film projector. After viewing the film, the student answered IIP questions and moved on to an activity area. The project team reviewed the program and made the general observations that quality loop films and descriptive tapes can substitute for teacher demonstration and explanation, and that quantitative and qualitative skill levels achieved by the students in the program were higher than those achieved by traditional methods. (DMT)

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# A MULTI-MEDIA APPROACH TO TEACHING ELEMENTARY SCHOOL GYMNASTICS

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Can the elementary school students assume more responsibility and be less dependent upon the teacher in a physical education gymnastic experience? An analysis of the characteristics, needs, and interests of the contemporary child seems to indicate that they can.

Is the exclusion or de-emphasis of gymnastics in the elementary school physical education program due to the inability of the teacher to demonstrate or verbally conceptualize the basic skills? The introduction of the open-classroom concept, individualized instruction, independent study, use of technology, and other innovations provide supportive evidence that there may be a new approach in methodology.

Accepting these premises, a cooperative project between the Department of Physical Education For Men, Purdue University and Cumberland Elementary School, West Lafayette, Indiana was initiated to develop a multi-media approach for teaching tumbling to upper elementary school boys and girls.

Developmental procedures

The developmental procedures were:

1. Selecting the tumbling stunts
   a. Forward roll and variations
   b. Backward roll, extension, and variations
   c. Cartwheel and round-off
   d. Roll-back neckspring and neckspring
   e. Headspring
   f. Handspring
   g. Headstand and variations
2. Establishing behavioral objectives for each stunt in each grade level.
3. Analyzing each specific stunt.
4. Producing loop films and correlated descriptive cassette tapes for each stunt.
5. Designing mini-I.I.P's (individualized instructional packets) to include both cognitive and psychomotor learnings to accompany each loop film and tape.
6. Designing supplementary, progressive, individualized skill sheets for rope skipping, balance beam, rope climbing, and interval running activities.
7. Conducting a pilot program for the refinement of materials, such as, reading comprehension and determining the relationship of the printed materials to the films and tapes.
8. Implementing the program.
9. Evaluating the program.

The program was initiated at Cumberland Elementary School, West Lafayette, Indiana for two co-ed sections of 4th, 5th, and 6th grades. Each section averaged thirty students with approximately an equal number of boys and girls. Each class met three times a week for thirty minutes.

Implementation Procedures

The gymnasium was divided into three viewing and listening areas, and five activity areas. The activity areas were used for tumbling, rope skipping, rope climbing, balance beam, and conditioning.

Each viewing area included a writing area, a loop film projector, a cassette recorder, a screen, and IIP's for one stunt. The activity areas had the necessary activity equipment and posted individualized skill sheets.

Each class was given a thorough orientation as to the program procedures and equipment operation. The class was divided into seven groups and randomly assigned to the three viewing areas and four activity areas.

At a viewing station, the student would read the IIP instructions, start the cassette recorder and at an indicated direction (by tape) start the loop film projector. After viewing the film and listening to the tape, the student would answer the IIP questions. An answer key was provided on the back page of the IIP for reinforcement.

After viewing and listening, the student moved to a tumbling activity area and completed the IIP skill grade level assignments with instructor assistance. When the student achieved the competency level for that grade, he was evaluated by the instructor. Based on the evaluation, the instructor could recommend that the student continue practicing at that level, work on the next level, select a new activity area or start a new I.I.P. New I.I.P's were periodically added to the viewing stations.

The same procedures were followed at the other activity areas, only the students worked from a posted individualized skill sheet.

The project team reviewed the program "after the fact" and arrived at the following descriptive analysis. Since the program was to refine materials and determine effective procedures, no attempt was made to make any statistical comparison of the effectiveness of this approach for teaching tumbling to that of traditional methodology.

General observations seemed to indicate that:

1. Quality loop films and descriptive tapes can substitute for teacher demonstration and explanation.
2. The quanitative and qualitative tumbling skill levels achieved by the students were slightly higher than those achieved by traditional methods.
3. The method gave consideration to varying levels of skill ability and students progressed at different rates.
4. The approach created a "non-pressure" teaching-learning environment.
5. The teacher had to make adjustments in his teaching behavior. He became more involved with the individual rather than the group.
6. The students quickly adapted to mechanical procedures.

The general comments by the students indicated that:

1. They enjoyed the "new" approach to teaching tumbling but would not want all activities taught this way.
2. They felt they learned more by this approach than by traditional methods.
3. The instructor gave them more individual instruction and evaluation.
4. They were able to receive and provide assistance to fellow students.
5. By answering the questions in the I.I.P., it enhanced their learning and understanding the tumbling skills
6. The skill assignments provided them with directed learning toward an attainable goal.

Limitations imposed an elementary school physical education program by the teacher, student's abilities, or facilities can be minimized by new approaches to teaching. Innovations, creativity, and imagination can take us beyond these limits.

"It is when we all play safe that we create a world of utmost insecurity."

Dag Hammarshjold

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